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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/665,192	09/16/2003	Brian Neunaber	158161-0004	5576

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IRELL & MANELLA LLP  
840 NEWPORT CENTER DRIVE  
SUITE 400  
NEWPORT BEACH, CA 92660

EXAMINER

MEI, XU

ART UNIT PAPER NUMBER

2644

DATE MAILED: 10/05/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/665,192	<b>Applicant(s)</b> NEUNABER, BRIAN	
	<b>Examiner</b> Xu Mei	<b>Art Unit</b> 2644	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
  - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
  - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
  - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 16 September 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-76 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-54, 58-62, 65-68 and 72-74 is/are rejected.
- 7) ☒ Claim(s) 55-57, 63, 64, 69-71, 75 and 76 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>2003/09/16</u> | 6) <input type="checkbox"/> Other: _____  |

Art Unit: 2644

**DETAILED ACTION**

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1-43 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1 and 23 recites the limitation "the control circuit". There is insufficient antecedent basis for this limitation in the claim.

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

or

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an

Art Unit: 2644

application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1-10, 19, 20, 44-52, 58, and 61-62 are rejected under 35 U.S.C. 102(e) as being clearly anticipated by Taylor (US-6,580,318).

Regarding claims 1-3 and 44-45, Taylor discloses an apparatus to limit power to a load including a voltage monitor and current monitor, a control circuit and signal attenuator for limiting input signal to drive a load as claimed (see embodiments of Figs. 1A-1E).

For what's called for in claims 4-6, 19, 46-48, 58 and 61, see Col. 6, lines 61-65. The power limiting apparatus of Taylor implemented in IC device, programmable devices, machine-readable media, software program would have inherently implemented in digital signals processing and user controlled GUI for parameters control.

Regarding claims 7-10, 49-52, the voltage and current sensors or monitors and the amplifier VGA would have inherently implemented different kinds of gain control as claimed.

For what's called for in claims 20, 62, see elements 114 and 120 in Fig. 1A.

Art Unit: 2644

5. Claims 23-24 and 65 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Strahm (US-5,170,437) or Itani (US-5,854,845).

Regarding claims 23 and 65, Strahm in Fig. 2 discloses an apparatus for limiting power to a speaker load with power or energy level detector means and signal attenuator for limiting input signal to drive the speaker load.

Regarding claims 23 and 65, Itani in Figs. 3-4 and 19 disclose an apparatus for limiting power to a speaker load with power level monitor or analyzing means and signal attenuator for limiting input signal to drive the speaker load.

Regarding claim 24, the variable gain device of Strahm and Itani is generally consists of operational amplifier.

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Art Unit: 2644

7. Claims 11-12, 25-33, 40-41, 53-54, 66-68, 74 are rejected under 35 U.S.C. 103(a) as being unpatentable over Taylor in view of Itani.

Regarding claims 11-12, 25-27, 32-33, 53-54, and 66-68 Taylor disclosed the power limiting apparatus as discussed above. What's not taught by Taylor is the apparatus including power signal detection and power level calculation of the detected power signals as claimed.

Itani discloses the power limiting apparatus in the same field of endeavor including power analysis of input signal as discussed above. It would have been obvious to one of ordinary skill in art to modifies the teaching of Taylor with the teaching of Itani to have an improved power limiting apparatus by including power analysis or detection of the input signal in order to provide more accurate signal conditioning control thus also increase accuracy of the voltage gain control for the entire power limiting apparatus.

For what's called for in claim 40, see Col. 6, lines 61-65. The power limiting apparatus of Taylor implemented in IC device, programmable devices, machine-readable media, software program would have inherently implemented in digital signals processing and user controlled GUI for parameters control.

Art Unit: 2644

Regarding claims 28-31, the voltage and current sensors or monitors and the amplifier VGA of Taylor would have inherently implemented different kinds of gain control as claimed.

For what's called for in claims 41 and 74, see elements 114 and 120 in Fig. 1A.

8. Claims 16-18 and 59-60 are rejected under 35 U.S.C. 103(a) as being unpatentable over Taylor in view of Ishimitsu et al (US-5,396,562).

Regarding claims 17-18 and 59-60, Taylor disclosed the power limiting apparatus as discussed above. What's not taught by Taylor is the apparatus including library of optimized control parameters for a plurality of speakers. Ishimitsu discloses an audio signal processing apparatus including speaker output adjusting section and a table selecting section (i.e., library) with optimized control parameters for optimize output gain control for different speakers). See figures 1A-1B. It would have been obvious to one of ordinary skill in the art to modifies the teaching of Taylor with the teaching of Ishimitsu to have an improved power limiting apparatus by including a library or table of optimized control parameters for optimize output gain control for different speakers in order to provide more accurate signal conditioning control thus also increase

Art Unit: 2644

accuracy of the voltage gain control for the entire power limiting apparatus.

9. Claims 37-39 and 72-73 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combinations of Taylor and Itani as discussed above and further in view of Ishimitsu et al (US-5,396,562).

Regarding claims 37-39 and 72-73, the combinations of Taylor and Itani disclosed the power limiting apparatus as discussed above. What's not taught by the combinations of Taylor and Itani is the apparatus including library of optimized control parameters for a plurality of speakers. Ishimitsu discloses an audio signal processing apparatus including speaker output adjusting section and a table selecting section (i.e., library) with optimized control parameters for optimize output gain control for different speakers). See figures 1A-1B. It would have been obvious to one of ordinary skill in the art to modifies the combinations of Taylor and Itani with the teaching of Ishimitsu to have an improved power limiting apparatus by including a library or table of optimized control parameters for optimize output gain control for different speakers in order to provide more accurate signal conditioning control thus also



Art Unit: 2644

increase accuracy of the voltage gain control for the entire power limiting apparatus.

10. Claims 13-15, 21-22, 34-36 and 42-43, would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

11. Claims 55-57, 63-64, 69-71 and 75-76 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.


Cullison et al, Trump, Williams, Williamson III, Klippel, Fink, Bonneville, Fujita, Azizi are made of record here as pertinent art to the claimed invention. The cited references disclose different audio signal control apparatus and speaker protection circuits including variable gain control.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Xu Mei whose telephone number is 703-308-6610. The examiner can normally be reached on Monday-Friday (9:30-6:00), alternate Friday off.

Art Unit: 2644

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Forester W Isen can be reached on 703-305-4386. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Xu Mei  
Primary Examiner  
Art Unit 2644  
09/27/2004